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In 81
90

FOREST CONTROL

by

CONTINUOUS INVENTORY

"Today I have grown taller from walking
with the trees."

...Karle Wilson

Milwaukee, Wis. September, 1961 No. 90

IN AN ASH COPSE -- 1683

I worked very hard in the copse of young ash, with my bill-hook and a shearing knife cutting out the saplings where they stooled too close together, making spars to keep for thatching, wall crooks to drive into the cob, stiles for close sheep hurdles, and handles for rakes and hoes, and two-bills of the larger and straighter stuff. And all the lesser I bound in faggots, to come home on the sled to the wood rick. It is not to be supposed that I did all this work without many peeps at the seven rocks' nest, which proved my Lorna's safety. Indeed, whenever I wanted a change, either from cleaving, or hewing too hard, or stooping too much at binding, I was up and away to the ridge of the hill, instead of standing and doing nothing.

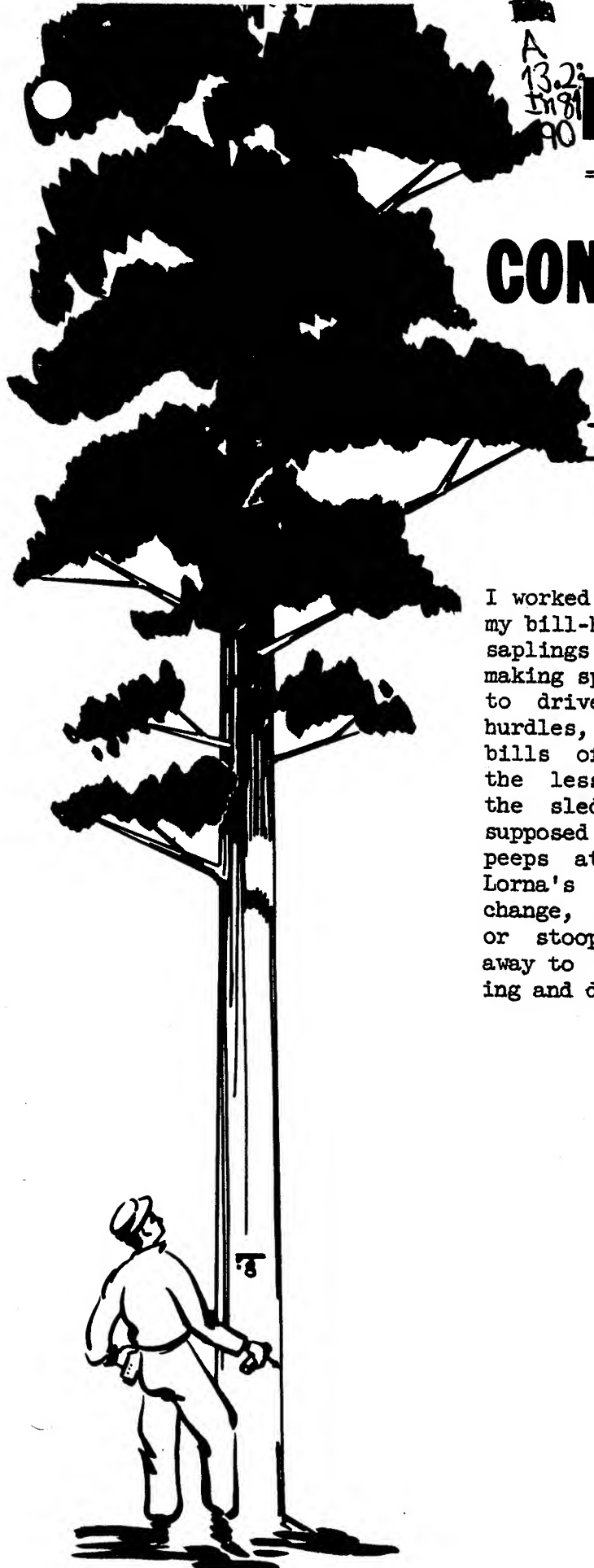
LORNA DOONE
A Romance of Exmoor

By R. D. Blackmore

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CAL STOTT
Region 9



CO-WORKERS IN SUCCESSFUL VENTURES MUST COOPERATE

The newsletter this month establishes clear evidence of great strides forward in the work of CFI in Region 9. Since this fruitful field of forestry is closely related to Forest Survey on which Clarence Chase of the Lake States Forest Experiment Station has so long concentrated, we are real pleased to dedicate this timber cruising issue to him. He, too, has had memorable exploits and accomplishments, and it has long been my belief that together we can do fine things for the woods.

Responsible for many of the more intricate details of Forest Survey in recent years, Clarence has worked for the U. S. Forest Service almost 3 decades. The last 16 of these years have been spent at the University Farm in St. Paul, Minnesota. From the vantage point of this center of forest research he has sent forth numerous and varied releases on the size of the Region's wood pile, and methods of measuring it.

No project or program of study is too refined for the thorough-going Clarence. His patience is unlimited and his persistence monumental. Many a month-long personal struggle in the preparation of cruising instructions has been canceled out on a moment's notice by his strong sense of self-criticism.

How often these familiar scholarly words are heard as his plans receive their first field trial, "I see now that my instructions are inadequate; they do not cover that particular type of tree. I must hasten to the Station, do some more thinking, and rewrite this section." This is the way progress is made, for,

"The race is not to the swift,
Nor the battle to the strong."

CAL STOTT
Forester

ONLY WHEN OUR ARMS ARE SUFFICIENT BEYOND DOUBT CAN WE
BE CERTAIN BEYOND DOUBT THAT THEY WILL NEVER BE EMPLOYED

St. Swithin Plays Havoc With CFI

CFI work on 7 cases involving 4,500 fixed radius plots and 125,000 individual tree records has been delayed this summer. It rained in many Lake States points and places July 15, and this is Saint Swithin's day. When it rains on this old English prelate's day, it rains for 40 days, more or less. At any rate, 34 crews have been picking up only 55 to 65 plots per day when they should be getting 75 to 85. Progress is heartening though, and almost constant field checking since late June has demonstrated that CFI is an inventory control system in which many companies have confidence.

Requiring no major revision in practice or principle during the past 8 years, CFI this season is receiving the greatest test of its young life. Over 3,000 circular plots are being remeasured after a waiting period of 3 to 5 years. A full report of the conveniences and difficulties of this work will be made in 1962. In the meantime, a spirit of satisfaction with prior work prevails. Oh, the air is pierced now and then by shrieks of disgust and despair from cruisers uncovering their own foolish blunders made a few short years before, but there should be fewer shrieks at the third measurement.

CFI DATA PROCESSING PLANS POORLY PREPARED
ARE WORSE THAN NO PLANS AT ALL

Stott's Idiot Stick

Little trouble has been experienced this year in getting industrial companies to use 20-foot bamboo measuring poles with top U-gauges. Public agencies, perhaps because they are not so strongly interested in directly comparable measurements, are not so willing to accept what one young man calls Stott's Idiot Stick for Lengths. The end of this difference of opinion is not yet in sight, but I predict that it will end, when the second measurement brings to light problems which arise because the first measurement lengths were guessed, or hypsometered, and not pole measured.

Diameter Tape Techniques Too Are Sometimes Resisted and Condemned

Early last month I watched an adamant cruiser measure the diameter of a tree in his own chosen way. The young man pulled the end of the tape held in his right hand over the top of the tape held in his left hand instead of under it as he should have done. As a result the tape graduations did not meet and could not be accurately read. His right arm made a shadow over the tape about the tree obscuring the graduations, and he found it necessary to scrunch down awkwardly to read the diameter. In the process of scrunching and squinting there was every opportunity for the tape to loosen and sag about the tree. I have little difficulty finding occasional high measurements with such tape techniques.

And so it goes. Each year I find one or two cruisers who flatly refuse to change their methods because they have been trained under different schoolmasters. There should be only one standard diameter tape technique for all cruisers at all measurement periods.

A Plastic Hammer for Sounding Small Trees

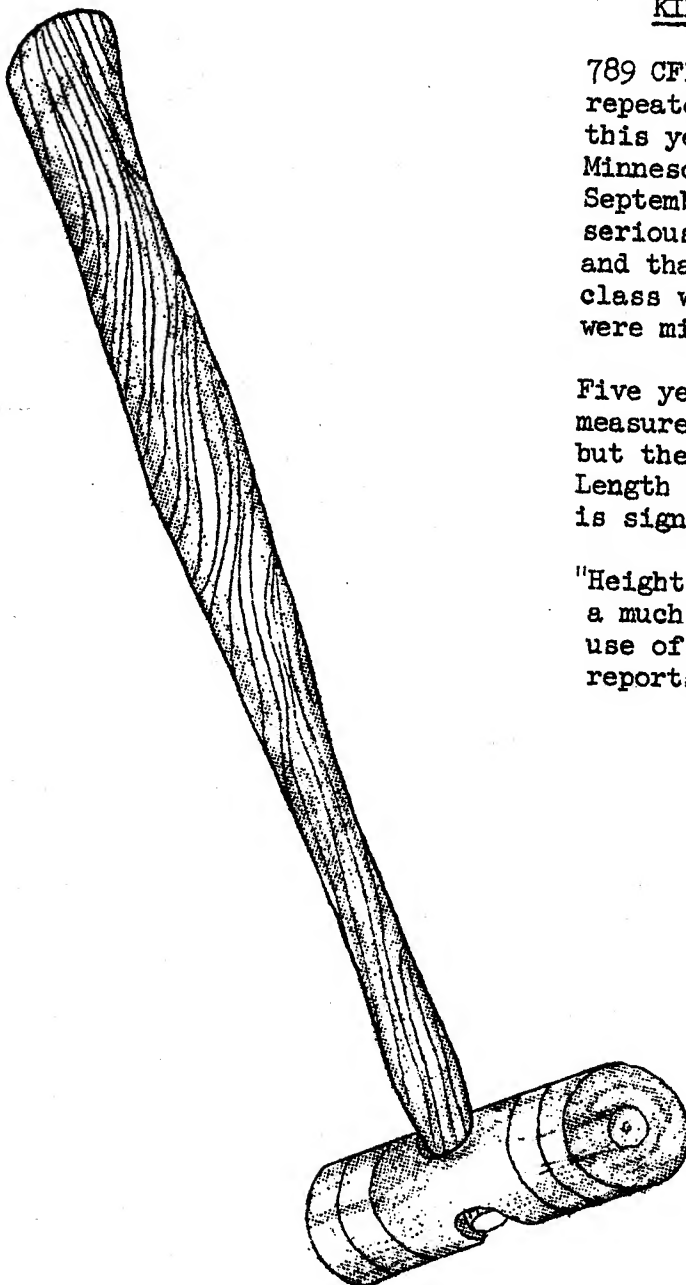
Atley Chapman, Forester on the Minnesota lands of the Kimberly-Clark Corporation, has experimented with a light plastic hammer for tree sounding. Although we have found the 1/2-pound Craftsman hand axe useful and successful for this purpose, we suggest further experimentation with this new tool. This lightweight plastic hammer with its rounded edges may be less damaging to cambium than a steel axe, and its cost is less than one dollar.

KIMBERLY-CLARK IS REMEASURING

789 CFI plot measurements have been repeated by Kimberly-Clark foresters this year. Two projects in northern Minnesota and Michigan were completed September 1. It is reported that no serious problems hampered the work, and that ingrowth to the 5" d.b.h. class was heavy. Only 2 plot stakes were missing.

Five years ago lengths were not pole measured in the Minnesota project but they were so handled in Michigan. Length correlation between measurements is significantly better in Michigan.

"Height measurements this year are on a much sounder basis, due to the use of the bamboo pole and calipers," reports Company Forester Ernie George.



SEEING THE JOB THROUGH IS THE MOST IMPORTANT
DICTUM FOR THE CFI CONSULTANT. GENERAL PLANS,
SAMPLING DESIGN, MACHINE CODES, CARD LAYOUTS,
FLOW CHARTS, FLOW PLANS, MACHINE SPECS, DATA
PROCESSING, AND ANALYSIS, FIELD INSTRUCTIONS,
PLOT DEMONSTRATION, TRAINING AND CHECKING;
--- ALL OF THESE ARE AMONG THE "MUST BE DONES"
FOR ALL THOROUGH GOING INVENTORY CONTROL
CONSULTING SPECIALISTS.

A Fine Christmas Present for the Copper Range Company

The Copper Range Company this summer is completing a 620 plot CFI project begun last year. Four cruisers will finish the remaining 300 plots before Christmas. The results, if the work is field checked, will be a fine Christmas present for the Copper Range for this is the first time in more than 20 years that the full 190,000 acre property has been cruised.

This company has successfully experimented with a remarkably worthwhile improvement in cruising procedure. Both men in the two-man crews measure and tally alternate tree numbers. It goes without saying that each man wears a timber cruiser's apron for his many tools and the Port-a-punch board. One of the cruisers carries a 10-foot pole and the other a 20 for measuring short, limby, and tall clean trees. Both poles are equipped with a standard U-gauge.

Not only has this alternate, individual tree cruising method reduced the cruising time per plot, but it has also increased cruiser interest in the work. Responsibility for accuracy is no longer shared by a tallyman and a cruiser, for one of the cruisers fully completes the odd-numbered trees and the other the even in each plot. This facilitates checking, ties down responsibility, and works wonderfully well where both men in the two-man crew are capable cruisers.

THERE IS LITTLE REASON WHY MANY DIFFERENT CRUISERS CANNOT
SCAN ANY COMMON, ORDINARY TREE AND SIMILARLY CLASSIFY ITS
DIMENSIONAL AND SILVICAL CHARACTERISTICS. OF COURSE, THE
RULES MUST BE SIMPLE AND ORDERLY AND THEY MUST BE LEARNED,
REMEMBERED, AND APPLIED TO THE TREE IN A LOGICAL MANNER.
PERSONAL NOTIONS, PREDECIDED OPINIONS, THOUGHTLESS GLANCES
AND DISORDERLY THINKING CANNOT PREVAIL IN THE TASK OF TREE
DESCRIPTION WITH THE CFI UNIT RECORD SYSTEM.

Cleveland-Cliffs Iron Company CFI in Progress

There will be over 30,000 individual tree card records on the 1,100 plot CFI project in progress on 350,000 acres of the CCI Company land and forest in Upper Michigan. Six two-man crews are on the job in the woods. Consisting largely of regular forest personnel, these men are working hard, long days to finish the job before hunting season begins November 15. All plots are fifth-acre circles taken on a systematic grid with photo points on only that small proportion of plot points which are without doubt permanently non-productive.

APPROXIMATELY 400 GALLONS OF GOOD GRADE OUTSIDE PAINT ARE BEING USED FOR PAINT NUMBERS AND DBH MARKS ON TREES IN PLOTS THIS YEAR IN THE LAKE AND CENTRAL STATES

Owens-Illinois Has 400 Permanent Plots to Remeasure

State & Private Forestry
Milwaukee, Wisconsin

"---- if you have time to help us again I would certainly appreciate your dropping in and checking our remeasurement to be sure that we are not going too far astray, and are properly standardizing procedures; and possibly check at least several times before the completion of the project. Please inform me if you can fit this in your program, and the date you will be able to help us.

Last week the two crews completed 33 plots, so apparently everything is going quite well. It is our present plan to complete the project by December 1."

Signed:xxxxxx xxxxx

St. Regis' Rhineland Paper Company Remeasures -- A Rem-Rand Job

Three CFI crews are recovering 660 fifth-acre plots at an average rate of 12 plots per day at Ripco. A short and a long bamboo pole are taken to each plot, and since measuring poles were also used at the first measurement five years ago, a logical and consistent top ingrowth is found in most trees. Eagle oiler cans of white and of tinted paint are also taken to each plot. Paper birch is numbered and marked with pink tinted paint. A word of caution comes from Nelson Paint Company of Iron Mountain, Mich. The pink tint may fade out unless the advice of an expert paint chemist has been followed in the preparation of the mix.

IT IS A PLEASURE TO REPORT THAT OVER HALFWAY THROUGH THE SEASON'S 3100 PLOT REMEASUREMENT NOT A SINGLE PLOT HAS BEEN FOUND DIFFERENTLY TREATED THAN THE SURROUNDING FORESTS. ALL PLOTS CONTINUE TO BE REPRESENTATIVE OF NATURAL AND MAN-CAUSED CHANGES.

A Four-Year Remeasurement in Koochiching County, Minnesota

Koochiching County, Minnesota is remeasuring 512 permanent, fixed radius plots this summer and fall. Systematically spotted over 300,000 acres of relinquished forest land, these plots are all being relocated without difficulty. Four crews are completing 40 to 50 plots each week, finding a considerable number of them doubled in tree count due to pulpwood ingrowth.

JUST BEFORE GOING TO PRESS

Word has been received from Koochiching County, Minnesota, that the CFI cruisers found one plot out of 512 left uncut in a sale contract. In this instance the forester in charge failed to inform the jobber of the proper cutting requirements for permanent plots. This particular one will be cut over during the winter months and the residual trees then measured.

WORKERS, PHILOSOPHERS AND SCIENTISTS--ALL OF THESE ARE IMPORTANT IN THE WORK AND IN THE WORLD OF THE WOODS. WITHOUT THEM ACCOMPLISHMENTS DECLINE, AND INSPIRATION WITHERS AND DIES.

Five-Year Remeasurement at the Minnesota and Ontario Paper Company

Mando is making a third measurement on 749 seventh-acre plots mechanically distributed over a quarter million acres of forest land in Minnesota. It has been impossible thus far to work with this region's most experienced CFI cruisers, but the time is coming when we will return to some of these plots first put in 8 years ago.

AND THE MEASURING POLE IS EASY TO HANDLE, TOO

A CFI PROJECT IN NORTHERN WISCONSIN SHOWS THAT ONLY 1285 TREES OUT OF A TOTAL OF 5162 TREES COULD NOT BE DIRECTLY MEASURED FOR USABLE LENGTH WITH A 20-FOOT BAMBOO POLE WITH U-GAUGE. THREE-FOURTHS OF THE TREES WERE MEASURABLE. THIS DISTRIBUTION VARIED CONSIDERABLY BY SPECIES.

<u>Species</u>	<u>No. of Trees</u>	<u>% Measurable</u>
Aspen	1,925	60
Paper birch	908	80
Black spruce	854	98
Northern white cedar	537	94
Red maple	360	92
Red pine	243	49
White pine	181	45
Jack pine	154	81
Totals	5,162	Average 75

Paint Numbering Trees Gaining Another New Convert

The awkward necessity for pulling nails on a share of the nail tagged trees on the one and only such project in the Region is giving encouragement to paint numbering at the next measurement. One other more serious fault has been found on this job. Smooth barked aspen and paper birch trees have developed a raised callus just above the nail holding the tag. This has required moving the measuring point upward on many trees, inducing a small though consistent error in diameter growth.

However, the latest word from this company indicates that "the crews are now removing the nails and tags from all trees, filling the holes with paint, and renumbering the trees in paint".

A NEW PAINT NUMBERING TECHNIQUE TRIED OUT
BY STATE AND PRIVATE FORESTRY

We have tried out 3 containers of tube paste paint on CFI plots in Wisconsin. Developed by the Nelson Paint Company of Iron Mountain, Michigan, these squeeze tubes of outside white tree numbering paint worked very well. We anticipate a production of twice as many numbers per gallon of paint as contrasted with past tree numbering methods. Developed from a special formula, the paint is of toothpaste consistency, clings well to the bark of rough or smooth trees, does not drip or run, and is neat and clean to use down to the last drop in the tube. There is little or no waste. Admirably suited to CFI or research work in pine or hardwood stands, the paint tube is handled like a huge pencil, and numbers and marks may be placed in deep crevices between the plate faces in pine or in hardwoods, thus assuring of better than average permanence. Large or small numbers down to 1" in height may be made swiftly with a minimum of practice.

Nelson Paint Company has a limited number of sample paint paste tubes on hand for free distribution. It is respectfully suggested by the Company that those securing samples (one tube per organization) report back to the Company on the efficacy of this new paint application technique.

CAL STOTT
Forester